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ABSTRACT

To determine the need for shorthand instruction in business education programs, a study and literature review were conducted on the status of shorthand as a job requirement for secretaries and stenographers. The literature review covered studies published prior to 1976 and indicated that shorthand was still considered a necessary skill at that time. Based on the replies received from 854 of the 1,851 Pennsylvania businesses surveyed, the future usefulness of shorthand appeared assured and the following conclusions were reached: (1) the larger the office staff, the more frequently shorthand is required; (2) a dictation speed of eighty to one hundred words per minute is usually expected for employment; (3) most applicants are asked to take a dictation test averaging six and a half minutes; (4) shorthand is not considered necessary for company advancement; (5) a high school education with business training is adequate for most secretarial/stenographic jobs; and (6) shorthand is not rapidly being replaced by word-processing centers since less than ten percent of the respondents have installed such centers. High school business courses should, therefore, continue to teach shorthand but should also offer instruction in the use of other media for recording dictation, give practice dictation tests like those used by businesses, and encourage students to achieve minimum skills and to regard high school as a culminating educational experience. (ELG)

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A STUDY TO DETERMINE THE UTILIZATION OF SHORTHAND IN PENNSYLVANIA OFFICES

An Independent Study
by
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with
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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The purpose of the project was to study the utilization of shorthand in selected Pennsylvania businesses.

OBJECTIVES:

1. To determine if shorthand is a requirement for employment in business offices
2. To determine how many office employees use shorthand in the business office
3. To determine, if possible, the predicted use of shorthand in the future office
4. To determine the shorthand dictation rate required for employment
5. To determine what educational requirements are necessary for secretaries and stenographers
6. To determine if shorthand is required but not used, does it determine promotions.

OUTCOMES:

1. Shorthand is required for employment by 44.4 percent of the firms responding to the question. (This was comparable to Robertson's study in the Portland area.) While this is less than half, it is too large a group to consider shorthand an obsolete skill.
2. Smaller firms tend to require shorthand more frequently than the larger firms.

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3. While shorthand skill is required by 369 business firms, 545 personnel managers indicated that shorthand is used in their office.

4. The future need for shorthand appears to be stable with 43.1 percent of the respondents predicting the demand for shorthand writers to remain the same and 12.2 percent of the respondents predicting an increase in the demand for shorthand writers.

5. Even in the age of technology, handwritten rough-draft documents are prepared by the originator to be transcribed by the secretary/stenographer.

6. The dictation test is the most prevalent method being used to determine shorthand proficiency. The type of business, size of office staff, number of secretaries or stenographers did not appear to influence the method used.

7. The dictation speeds of 80 wpm and 100 wpm were the most frequently reported standards for employment. This finding supports Hornstein's finding.

8. The average length of the employment dictation test was 6.5 minutes, a little longer than typical dictation exercises in the classroom.

9. Because there are other factors involved in considering promotions and a variety of media available for handling dictation, shorthand was not considered to be of value for promotion by 61.7 percent of the firms answering the question.

10. Business firms consider a high school education with business education training to be adequate for employment as a secretary or stenographer.

11. This study shows that of the 777 companies which answered this question, only 68 companies have established word processing centers. The writer concludes that shorthand is not being replaced by word processing technology as predicted.

Audience

This study would be helpful to any business educator who is interested in trends for the future of shorthand, developing curriculum, or justifying shorthand in the curriculum.

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A STUDY TO DETERMINE THE UTILIZATION OF SHORTHAND IN PENNSYLVANIA OFFICES

Rationale

The demise of shorthand has been predicted since the early fifties when dictation/transcription machines were introduced in business offices. The manufacturers of this equipment presented the theory that machines would replace shorthand.

The sixties saw the introduction of "word processing," the "dictation tanks" and magnetic typewriters. Again shorthand was to become obsolete according to business executives and equipment manufacturers.

With the refined dictation equipment and automatic, electronic typewriters of the seventies, shorthand was termed a nonessential skill; however, a study of the classified sections of newspapers indicates that shorthand is still required--but is it used?

Purpose of the Study

It is hoped that this study will determine the status of shorthand in selected Pennsylvania businesses so that business educators will have a better understanding of the need for shorthand instruction to meet the demands of business. If it is found that shorthand has a limited use or will no longer be required, perhaps other office skills could be included in the curriculum of the future.

Statement of the Problem

Is shorthand required and used in the modern office? Will it continue to be used in the office of the future?

Delimitations

This study was limited to the state of Pennsylvania, and in no way makes any assumptions concerning the use of shorthand in other states.

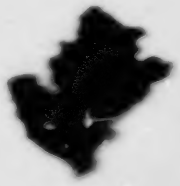
This study in no way attempts to determine how shorthand is used or what percent of time is used in taking shorthand dictation.

The names of participants in this study were taken from Dun and Bradstreet's Million Dollar Directory and Dun and Bradstreet's Middle Market; therefore, the Standard Industrial Classification for government offices and firms not listed in these directories were not used in this study.

The business firms selected had a minimum of five employees.

Businesses which operate under different names but at the same mailing address were contacted only at the first listing.

The study included the cities of Philadelphia, Pittsburgh, Allentown, Erie, Scranton, Altoona, Bethlehem, Chester, Harrisburg, Reading, Wilkes-Barre, York, Lancaster; ten percent of the cities with a population of 10,000 to 49,999 were randomly selected (nine cities) and ten percent of the towns with a population of 1,000 to 9,999 were randomly selected (69 towns).



Procedures

After reading available current literature and previous studies on the use of shorthand, a questionnaire was developed, refined, and tested in a pilot study. Those personnel managers participating in the pilot study generally made the same comments for the improvement of the questionnaire; the questionnaire was revised to incorporate their suggestions.

The reference book, Characteristics of the Population, Volume 1, Pt. 40, Sec. 1, was used to study the population spread of Pennsylvania. All of the cities with a population of 50,000 or more were selected; 10 percent of the cities with a population of 10,000 to 49,999 were randomly selected as were 10 percent of the towns with a population of 1,000 to 9,999.

For these selected cities, Dun and Bradstreet's Middle Market and Million Dollar Directory were used to secure the company name and address, Standard Industrial Classification (SIC), and number of employees. All businesses listed with five or more employees were included in the study.

Each business firm chosen was assigned a chronological number beginning with one. The number was keypunched along with the name, address, city, state, SIC, and the number of employees.

Mailing labels were then printed to include the title "Personnel Manager," name of business, address, city, state, and the indentification number.

The questionnaires were numbered chronologically also. The mailing included a cover letter, numbered questionnaire, and a self-addressed, postage paid return envelope.

Another set of data cards was printed to include the identification number, name of company, SIC, and the number of employees. As the questionnaires were returned, the corresponding data cards were pulled and the data punched daily.

The address cards used for mailing labels were also pulled as the questionnaires were returned and kept separate. A second mailing label was printed for each company not responding to the first letter.

A follow-up letter and a second questionnaire, which was numbered, were forwarded to all businesses which did not return the questionnaire by the return date.

The questionnaires received in response to the follow-up letter were handled the same as the first group.

Programs were written for the computer to tabulate the results of the questionnaire responses.

Chapter 2

REVIEW OF LITERATURE

Several surveys have been completed to determine the actual utilization of shorthand.

In 1969 Biggers compared the use of shorthand with that of dictation machines in the Columbus, Ohio, area. The results of this study indicated that 76 percent of the firms had employees who used shorthand; 18 percent of the firms used shorthand exclusively as the medium for recording dictation; 59 percent of the firms used a combination of shorthand and a dictation machine.[1]

Biggers study showed that 81 percent of the employees with the job title "secretary" used shorthand and that 93 percent of those employees with the job title "stenographer" used shorthand.[2]

A study of the utilization of shorthand and machine transcription in St. Paul-Minneapolis area was made by Mitchell and Olson in 1969. This study showed that 73 percent of the firms which participated in the survey employed shorthand writers.[3]

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[1]Beverly A. Biggers, "The Status of Shorthand and Recording Machines Used in Representative Business Firms in Columbus, Ohio," Master's Thesis Ohio State University, Columbus, 1969.

[2]George A. Wagoner, "Shorthand Research Review," Business Education World, March-April, 1976, p. 31

[3]Susie J. Hess, "Shorthand and the Changing Office Scene," Business Education World, November-December, 1976, p. 10.

The Mitchell and Olson study included 84 firms employing 500 or more people; 95 percent of these firms hired shorthand writers.[4] Approximately 50 percent of the respondents felt their need for shorthand writers would remain the same Of the firms participating, 14 percent of all firms and 20 percent of the larger firms indicated their need for shorthand writers would increase.[5]

Hornstein's telephone survey of 20 large corporations in New York City in 1972 showed that all the companies hired shorthand writers and required a dictation rate of 80 wpm to 100 wpm.[6]

In 1972 Judith Olson completed a study to determine the systems used to record and transcribe dictation in the Milwaukee area. Olson's study found that 38 percent of the participants used only manual shorthand, 31 percent used only dictation machines, 29 percent used a combination of manual shorthand and dictation machines.[7]

Olson's study also included a question on the future use of shorthand. Seventy-three firms responded to the question; and of these 38 percent indicated the skill was important, 35 percent felt the demand for shorthand writers would remain the same; 10 percent preferred machine dictation and 9 percent indicated the demand for shorthand writers would decrease.[8]

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[4]William Mitchell and Adelyn Olson, "Who Needs Shorthand! Who Needs Secretaries," Business Education World, May-June, 1970, p. 6-7.

[5]Mitchell and Olson, p. 6-7.

[6]Brenda Hornstein, "Is Stenography Still Relevant in the Business Office," Business Education Forum, April, 1973, p. 48.

[7]Judith Ann Olson, "A Study To Determine the Systems Used To Record and Transcribe Business Office Dictation in the Milwaukee, Wisconsin, Area," Master's Thesis, University of Wisconsin, 1973.

[8]Wagoner, p. 31

Conley's 1972 survey of the San Francisco Bay area which included 8,128 employees found that 64.2 percent of the jobs required shorthand. Both shorthand and machine transcription were required by 10.5 percent.[9]

Marshall's study in Logan, Utah, 1973, showed that of the nineteen secretaries responding to the questionnaire, 42.1 percent reported shorthand was used on the job and 26.1 percent indicated that shorthand was required for employment.[10]

A study of 117 large businesses in Michigan was completed by Scammon in 1974. Scammon interviewed 72 secretaries, 72 employers, and 72 personnel managers. The findings of this study showed that 76 percent of the secretaries used shorthand.[11]

In a 1975 study, Mitchell selected at random 1,420 secretaries and found 82 percent of the respondents used shorthand on a daily, weekly, or monthly basis.[12]

A 1975 study of 100 South Carolina businesses by Matthews showed that 38.9 percent of the employees rated the skill of transcribing shorthand notes with speed and accuracy as extremely important or above average in importance.[13]

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[9]Hess, p. 11.

[10]Sandra Yvonne Marshall, "An Analysis of the Utilization of Shorthand As Compared to the Utilization of Other Transcribing Methods in Selected Logan Business Offices," Master's Thesis, Utah State University, 1973.

[11]Samuel M. Scammon, "An Analysis of the Need For and Use of Shorthand By Secretaries in Large Businesses As Indicated by Secretaries, Managers, and Personnel Directors," A Doctoral Dissertation, Michigan State University, East Lansing, 1974.

[12]Hess, p. 11.

[13]Hess, p. 11.

In 1975 an independent study done in the Portland area by Robertson, 24 percent of the respondents indicated shorthand was most important or very important. The greatest percent of firms stated they had some preference for shorthand. Although 53 percent of the respondents did not require shorthand for employment as a secretary, 44 percent did require the skill.[14]

In gathering data for her dissertation, Reiff visited offices which had word processing centers. She observed secretaries leaving their stations to take dictation in shorthand and then return to the center to transcribe their notes.[15]

The Pennsylvania Department of Labor in Pennsylvania Occupational Projections predicts a 27 percent increase in stenographers, typists, and secretarial positions in 1985.[16] The same publication states that opportunities for employment as a secretary are excellent because secretaries are essential to almost all industries especially banking, insurance, and government.[17]

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[14]Leonard Robertson, "Office Requirements in the Portland Standard Metropolitan Arean, " The Delta Pi Epsilon Journal, November, 1975; p. 14-19.

[15]Rosanne Reiff, "A New and Different Look At Word Processing," Journal of Business Education, May, 1975; p. 331.

[16]Pennsylvania Occupational Projections prepared by Research and Statistics Division, Labor Market Information Section, December, 1976; p. 27.

[17]Pennsylvania Occupational Projections, p. 13.

Summary

Each of these studies showed chat shorthand is a needed skill in the business office. These studies were completed prior to 1976, before the extensive promotion of word processing centers. No study on the utilization of shorthand in Pennsylvania was found.

The Pennsylvania Labor Department's prediction of a 27 percent increase does not indicate the use of shorthand, only the increased employment opportunities for secretaries.

Chapter 3

FINDINGS

A copy of the questionnaire was sent to 1851 businesses in Pennsylvania. Of those sent, 887 were returned, and 854 were considered usable. Not all questions were answered on the returned questionnaires since the questions did not apply to each company. When analyzing the data, the findings were based on the number of replies to the particular question.

No assumptions have been made regarding those questions not answered.

The data was analyzed by the following variables: total response, SIC, number of office staff, and number of secretaries and stenographers.

Is Shorthand Required for Employment As A Secretary or Stenographer?

Based on the number of people who answered the question (828), 44.4 percent require shorthand for employment as a secretary or stenographer. The response of the various types of businesses that require shorthand for secretaries and stenographers is given in Table 1.

While some firms in all types of business require shorthand for employment as a secretary or stenographer, the study indicated that agriculture, transportation, and finance groups require shorthand more often than the other types of businesses.

TABLE I

PERCENT OF COMPANIES WHICH REQUIRE SHORTHAND FOR EMPLOYMENT AS A SECRETARY OR STENOGRAPHER ACCORDING TO SIC

Standard Industrial Classification	Percent of Response*
Agriculture, Forestry, Fishing	66.7
Mining	33.3
Construction	47.1
Manufacturing	44.7
Transportation, Communication, and other Public Utilities	61.7
Wholesale Trade	34.6
Retail Trade	33.8
Finance, Insurance, and Real Estate	51.1
Services	48.1

*Based on number responses to this question.

The hypothesis that shorthand would be required by all types of business, some more than others, is supported.

Does the Number of Total Office Workers Affect the Requirement of Shorthand? Does the Number of Secretaries or Stenographers Change the Requirement?

Table 2 on page 12 indicates that, in general, the larger the office staff, the more often shorthand is required. It seems that the more secretaries or stenographers employed in the business office, the more prevalant the shorthand requirement except for companies with over 300 secretaries or stenographers.

TABLE 2

PERCENT OF COMPANIES WHICH REQUIRE
SHORTHAND FOR EMPLOYMENT AS A
SECRETARY OR STENOGRAPHER
ACCORDING TO NUMBER OF OFFICE EMPLOYEES
AND NUMBER OF SECRETARIES OR STENOGRAPHERS

Number of Office Employees	Number of Responses	Percent Requiring Shorthand*	Number of Secretaries/ Stenographers	Number of Responses	Percent Requiring Shorthand*
1- 10	454	37.4	1- 10	702	41.3
11- 25	178	46.1	11- 25	68	58.8
26- 50	87	55.2	26- 50	24	62.5
51-100	50	64.0	51-100	15	66.7
101-200	21	61.9	101-200	8	87.5
201-300	12	41.7	201-300	4	75.0
over 300	21	76.2	over 300	3	33.3

*Percent of responses for this classification

Use of Shorthand By Secretaries and Stenographers

The possibility that shorthand is required for employment but not used on the job was considered.

Respondents were asked to indicate the percent of employees who transcribe dictation from shorthand notes, machine dictation, both or other.

Based on the 545 responses which indicated shorthand was used, 52.1 percent (284) of the firms stated that 1 to 25 percent of their secretaries use shorthand; 13.7 percent (76) of the firms stated 26 to 50 percent of their secretaries use shorthand; 7.7 percent (42) of the firms said 51 to 75 percent of their secretaries use shorthand; and 26.2 percent (143) of the firms indicated that 76 to 100 percent of their secretaries use shorthand.

Table 3 below gives a comparison of the four recording media transcribed by secretarial/stenographic employees.

It is of interest to note that "other" was usually described as "handwritten" or "rough draft." In the age of machines, there are individuals who still prefer the handwritten method of document preparation. Only one response indicated machine shorthand was used.

TABLE 3

PERCENT OF TRANSCRIPTION BY SECRETARIAL/STENOGRAPHIC EMPLOYEES OF VARIOUS RECORDED MEDIA

Media	Number of Responses	Percent of Secretarial/Stenographic Employees			
		1-25%*	26-50%	51-75%	76-100%
Manual Shorthand	545	52.1	13.9	7.7	26.2
Machine Transcription	388	47.4	18.4	11.0	23.4
Both	192	57.2	19.3	9.0	14.6
Other	121	52.1	12.4	6.6	28.9

*The column heading 1-25% was changed to show only the responses which definitely indicated the use of the medium. If there was any question, the writer did not include the response. The questionnaire stated 0-25%.

The difference between the number of companies which require shorthand and the number of companies which have secretaries or stenographers who use shorthand for transcription is assumed to be that secretaries use shorthand even though it may not be required by the company for employment.

Some personnel managers commented that shorthand would be used more often if qualified shorthand writers were available in their particular area. Also, several comments indicated that shorthand is used in the office for purposes other than dictation.

The companies which changed from manual shorthand dictation to machine dictation indicated reasons such as saving of time and money, better use of secretaries' time, lack of qualified shorthand writers. One company changed from machine dictation back to manual shorthand.

Of the companies responding to the question regarding future changes in recording media, 89.4 percent anticipated no change.

Sixty-eight companies of 777 which answered the question, stated they have established word processing centers.

What Shorthand Dictation Speed is Required for Employment As a Secretary or Stenographer?

Of those companies requiring shorthand for employment, a shorthand rate of 80 wpm or 100 wpm was indicated by 80.8 percent. Less than 6 percent required a dictation speed above 120 wpm and almost 20 percent had no minimum requirement.

Although only 386 companies indicated that shorthand is required, 375 companies responded to this question. Therefore, it is assumed that if shorthand were required for employment, these companies would have a minimum dictation standard.

TABLE 4

DICTATION SPEED REQUIRED
FOR EMPLOYMENT
AS A SECRETARY OR STENOGRAPHER

Rate	Number of Responses	Percent
60	60	16.0
80	144	38.4
100	84	22.4
120	14	3.7
No Minimum	67	17.9
Other	6	1.6

Table 5 illustrates the dictation rate for each SIC. It is of interest to note that Agriculture, Forestry, and Fishing and Mining indicated a rate of 60 wpm or 80 wpm was required, while 38.5 percent of Retail Trade businesses had no minimum requirements. However, the range of responses indicated a diversity in each classification.

TABLE 5

PERCENT OF EMPLOYEES AND
DICTATION SPEED REQUIRED FOR
EMPLOYMENT AS A SECRETARY OR STENOGRAPHER
BY STANDARD INDUSTRIAL CLASSIFICATION

Standard Industrial Classification	Dictation Speed					
	60	80	100	120	No Minimum	Other
Agriculture Forestry Fishing	50.0%	50.0%				
Mining	20.0	80.0				
Construction	6.3	40.6	31.3%		21.9%	
Manufacturing	12.1	40.5	25.0	7.8%	12.1	2.6%
Transportation Communications Pub. Utilities	25.0	37.5	6.3	3.1	21.9	6.3
Wholesale Trade	25.9	31.0	17.2	5.2	20.7	
Retail Trade	11.5	23.1	26.9		38.5	
Finance Insurance Real Estate	14.8	42.0	23.9	1.1	17.0	1.1
Services	14.3	35.7	35.7		14.3	

The possibility that the size of office staff and the number of secretaries might influence the shorthand speed requirement was considered. The dictation speeds of 80 wpm and 100 wpm were still the most common speeds required as Tables 6 and 7 indicate.

TABLE 6

PERCENT OF COMPANIES
BY NUMBER OF OFFICE EMPLOYEES
REQUIRING SELECTED DICTATION SPEEDS

Number of Office Employees	Dictation Speed					
	60	80	100	120	No Minimum	Other
1- 10	20.1%	35.5%	18.3%	5.3%	18.9%	1.8%
11- 25	18.8	32.5	25.0	2.5	20.0	1.2
26- 50	5.8	38.5	28.8	3.8	21.2	1.9
51-100	18.2	36.4	24.2		18.2	3.0
101-200		57.1	35.7		7.1	
201-300	16.7	66.7	16.7			
over 300	5.9	64.7	17.6	5.9	5.9	

TABLE 7

PERCENT OF COMPANIES
BY NUMBER OF SECRETARIES/STENOGRAPHERS
REQUIRING SELECTED DICTATION SPEEDS

Number of Secretaries/Stenographers	Dictation Speed					
	60	80	100	120	No Minimum	Other
1- 10	17.7%	34.5%	21.2%	4.1%	20.8%	1.7%
11- 25	12.8	41.0	30.8	2.6	12.8	
26- 50	5.9	64.7	23.5			5.9
51-100	9.1	63.6	18.2	9.1		
101-200	11.1	44.4	33.3		1.1	
201-300		100.0				
over 300		100.0				

How is Shorthand Proficiency Determined?

Shorthand proficiency was determined by a dictation test for 53.2 percent of the companies responding to the question. School records were used by 18.1 percent of the respondents, while 21.5 percent of the businesses indicated shorthand proficiency was not determined. Former employers were contacted by 7.2 percent of the respondents.

Table 8 shows the percentage of companies by SIC classification that used various methods for determining proficiency.

TABLE 8

METHODS USED TO DETERMINE SHORTHAND PROFICIENCY ACCORDING TO SIC
(Based on Total Number of Responses in Each Category)

Standard Industrial Classification	Number of Responses	Method Used by Percent of Respondents			
		Dictation Test	School Records	Former Employer	Not Determined
Agriculture Forestry Fishing	4	50.0	25.0		25.0
Mining	6	66.7		16.7	16.7
Construction	33	48.5	18.2	15.2	18.2
Manufacturing	124	57.3	14.5	8.1	20.2
Transportation Communications Other Pub. Utilities	31	54.8	25.8	3.2	16.1
Wholesale Trade	63	52.4	17.5	4.8	25.4
Retail Trade	27	48.1	14.8	11.1	25.9
Finance Insurance Real Estate	101	48.5	24.8	5.9	20.8
Services	15	66.7			33.3

The type of business did not affect the method used to determine the shorthand proficiency; a dictation test was the method most frequently employed.

When the variables of size of office staff and the number of secretaries or stenographers were considered, dictation tests were still the most frequently used. The second most frequently used method to determine proficiency was school records.

The average length of the dictation test was 6.5 minutes. Percent of accuracy of transcription was on the average a 91.6 percent, with acceptable transcripts ranging from 80 percent to 100 percent accuracy. No minimum transcription time was set by 59.9 percent of the companies responding (217) and 28.1 percent permitted a 30-minute transcription period.

Does Shorthand Skill Enhance a Person's Promotion Opportunities?

When asked if shorthand skill enhanced a person's promotion opportunities, 61.7 percent of the companies responding to the question said "no." Many respondents commented that if a person was a good worker, the company would consider this rather than shorthand skill. Some comments also indicated that if an employee did not have shorthand, longhand rough draft or machine dictation could be used.

What is the Minimum Level of Education for a Secretary or Stenographer?

Education requirements for a secretary or stenographer may be met with a high school education with a specialization in business education. Of the 831 companies responding to this question, 59.8 percent require high school education with business education training.

Of the companies responding to this question, 21.4 percent indicated they had no education requirement, but applicants must have skills, knowledge, and abilities.

Table 9 on page 19 summarizes the responses to this question.

TABLE 9

MINIMUM LEVEL OF EDUCATION
FOR A SECRETARY OR STENOGRAPHER

(Based on 831 Responses)

Level of Education	Number of Responses	Percent of Responses
No education level specified, but must possess knowledge. skills, abilities	178	21.4
High school with business education training	497	59.8
High school with no business education training	120	14.4
Business school	26	3.1
Two-year college graduate with business training	9	1.1
Four-year college graduate with business training	1	.1

How Will The Demand For Shorthand Writers Change Withing The Next Ten Years?

In general, 44.7 percent of the respondents (332) predicted a decrease in the demand for shorthand writers. However, 43.1 percent (320) of the respondents indicated the demand for shorthand writers will remain the same, and 12.2 percent (91 companies) predicted there will be an increase in the demand for shorthand writers.

The demand for shorthand writers within the next ten years according to SIC is shown in Table 10 at the top of page 20. The percentages represent how many of the respondents replied, not the degree of increase or decrease.

Table 11 at the top of page 21 shows the prediction for demand for shorthand writers within the next ten years by size of office staff.

TABLE 10

DEMAND FOR SHORTHAND WRITERS
WITHIN THE NEXT TEN YEARS
BY SIC

SIC	Percent of Respondents		
	Decrease	Remain the Same	Increase
Agriculture Forestry Fishing	25.0	25.0	50.0
Mining	46.7	40.0	13.3
Construction	33.3	43.9	22.8
Manufacturing	47.4	40.8	11.8
Transportation Communication Other Pub. Utilities	38.3	40.4	21.3
Wholesale Trade	40.5	44.4	8.1
Retail Trade	50.7	47.8	1.5
Finance Insurance Real Estate	41.0	45.8	13.3
Services	54.2	33.3	12.5

TABLE 11

DEMAND FOR SHORTHAND WRITERS
WITHIN THE NEXT TEN YEARS
BY NUMBER OF OFFICE EMPLOYEES

Number of Office Employees	Percent of Respondents		
	Decrease	Remain the Same	Increase
1- 10	47.1	41.2	11.7
11- 25	43.6	42.4	13.9
26- 50	38.3	51.9	9.9
51-100	35.4	50.0	14.6
101-200	52.6	42.1	5.3
201-300	27.3	63.6	9.1
over 300	57.9	26.3	15.8

Table 12 shows the predicted demand according to the number of secretaries or stenographers employed.

TABLE 12

DEMAND FOR SHORTHAND WRITERS
WITHIN THE NEXT TEN YEARS
BY NUMBER OF SECRETARIES OR STENOGRAPHERS

Number of Secretaries or Stenographers	Percent of Respondents		
	Decrease	Remain the Same	Increase
1- 10	45.6	42.1	12.3
11- 25	32.8	56.3	10.9
26- 50	57.1	33.3	9.5
51-100	35.7	64.3	
101-200	44.4	11.1	44.4
201-300	50.0	50.0	
over 300	100.0		

Summary

Shorthand is required by 44.4 percent of the companies responding to the question. Although shorthand is required by companies within all SIC classifications, it is required by more companies in the agriculture, forestry and fishing; transportation, communications, and other public utilities; finance, insurance and real estate categories.

Shorthand is used more often than it is actually required for employment.

The dictation rates of 80 wpm and 100 wpm are most often required, but in some companies a rate of 60 wpm is acceptable and in others a speed of 120 wpm is required. Sixty-seven companies, or 17.9 percent, indicated no minimum speed was required.

Shorthand proficiency was determined by a dictation test which averaged 6.5 minutes; the length of the tests ranged from a single letter to twenty minutes of dictation.

An average acceptable rate of accuracy of the transcribed material was 91.6 percent. The required time for transcription varied, but 28.1 percent of the firms permitted a 30-minute transcription time, and 59.9 percent said no minimum time was set.

A high school education would be adequate if the individual had a business education background as indicated by 59.8 percent of the firms responding to the question.

All media for recording dictation for transcription were represented in the companies in this study. Handwritten source documents were used by 121 companies, but shorthand was by far the most frequently used method of recording dictation.

The demand for shorthand writers was predicted to decrease by 44.7 percent of the respondents, while 43.1 percent of the firms thought the demand would remain the same, and 12.2 percent predicted an increase in the demand for shorthand writers.

Chapter 4

CONCLUSIONS

1. Shorthand is required for employment by 44.4 percent of the firms responding to the question. This was comparable to Robertson's finding in the Portland area study. While this is less than half, it is too large a group to consider shorthand an obsolete skill.

2. Smaller firms tend to require shorthand more frequently than the larger firms.

3. While shorthand is required by 368 business firms, 545 personnel managers indicated that shorthand is used in their offices.

4. The future of shorthand tends to be stable with 43.1 percent of the firms predicting the demand for shorthand writers to remain the same and 12.2 percent of the firms predicting an increase in the demand for shorthand writers.

5. Even in the age of technology, handwritten rough draft documents are prepared by the originator to be transcribed by the secretary or stenographer.

6. The dictation speed of 80 wpm to 100 wpm was most frequently required for employment. This finding supports Hornstein's finding.

7. The dictation test is the most prevalent means used to determine shorthand proficiency. The type of business, size of office staff, number of secretaries or stenographers did not seem to influence the method used.

8. The average length of the employment dictation test was 6.5 minutes, a little longer than typical dictation exercises in the classroom.

9. Because there are other factors involved in considering promotions and a variety of media available for handling dictation, shorthand was not considered to be of value for promotion by 61.7 percent of the firms answering the question.

10. Business firms consider a high school education with business education training to be adequate for employment as a secretary or stenographer.

11. This study shows that of the 777 companies who answered the question concerning word processing centers, 68 companies indicated they have established centers. The writer concludes that shorthand is not being replaced by word processing technology was predicted.

12. Shorthand is a valuable skill and should continue to be taught in the high school and college level programs.

Chapter 5

RECOMMENDATIONS

1. Business educators should continue to teach shorthand but put less emphasis on high dictation speed and concentrate more on developing transcription and language art skills which are required regardless of the recording media employed.

2. Business educators should encourage students to complete the shorthand program and achieve at least minimum skill.

3. Because all media for recording dictation are used in the business offices, students should develop skill in shorthand transcription, machine transcription, and longhand and rough-draft transcription.

4. Dictation should be given for longer periods of time and students should be accustomed to taking dictation tests for employment.

5. Since a high school education with business education training is adequate for employment as a secretary or stenographer, business educators should stay informed of business practices. Teachers and students should consider high school education as a culminating process, not as an exploratory experience.

BIBLIOGRAPHY

Biggern, Beverly A. "The Status of Shorthand and Recording Machines Used in Representative Business Firms in Columbus, Ohio," Master's Thesis, Ohio State University, 1969.

Characteristics of the Population, Vol. I, Pt. 40, Sec. 1 U. S. Dept. of Commerce, Bureau of the Census.

County Business Patterns, 1975, Pennsylvania. U. S. Dept. of Commerce, Bureau of the Census.

Dun and Bradstreet Middle Market Directory, 1978. Dun and Bradstreet, Inc. New York, New York.

Dun and Bradstreet Million Dollar Directory, 1978. Dun and Bradstreet, Inc. New York, New York.

Henn, Sandie J. "Shorthand and the Changing Office Scene," Business Education World, November-December, 1976.

Hornstein, Brenda. "Is Stenograph Still Relevant in the Business Office," Business Education Forum, April, 1973.

Marshall, Sandra Yvonne. "An Analysis of the Utilization of Shorthand As Compared to the Utilization of Other Transcribing Methods in Selected Logan Business Offices," Master's Thesis, Utah State University, 1973.

Mitchell, William and Adelyn Olson. "Who Needs Shorthand! Who Needs Secretaries," Business Education World, May-June, 1970.

Olson, Judith Ann. "A Study To Determine the Systems Used to Record and Transcribe Business Office Dictation in the Milwaukee, Wisconsin, Area," Master's Thesis, University of Wisconsin, 1973.

Pennsylvania Occupational Projections. Prepared by Research and Statistics Division, Labor Market Information Sections, December, 1976.

Reiff, Roxanne. "A New and Different Look At Word Processing," Journal of Business Education, May, 1975.

Robertson, Leonard. "Office Requirements in the Portland Standard Metropolitan Area," The Delta Pi Epsilon Journal, November, 1975.

Scammon, Samuel M. "An Analysis of the Need For and Use of Shorthand by Secretaries in Large Businesses As Indicated by Secretaries, Managers, and Personnel Directors," A Doctoral Dissertation, Michigan State University, 1974.

Wagoner, George A. "Shorthand Research Review," Business Education World, November-December, 1976.

APPENDIX

SHIPPENSBURG STATE COLLEGE • SHIPPENSBURG, PENNSYLVANIA 17257

April 5, 1978

Dear Sir:

Business educators are interested in learning if shorthand is used in the modern business office. During the past few years, we have been hearing that shorthand is going to be obsolete, that employers do not use shorthand for dictation, and that business educators are teaching skills which the students will not use.

Knowing what the real situation is in the state of Pennsylvania will help business educators develop a curriculum based on the present and future needs of business firms.

You have been selected to be a participant in this state-wide study. Would you please complete the enclosed questionnaire based on your company's practices. All data will be kept confidential. We ask for your name only for follow-up purposes.

Could you return the questionnaire by April 15, 1978, using the enclosed self-addressed, stamped envelope. Your cooperation in this study will help business educators better prepare students for employment in business offices.

Sincerely,

Ruth D. Armstrong

Ruth D. Armstrong, Chairman
Business Education/Office Administration

Elizabeth B. Meinstereifel
Graduate Assistant

Enclosures

(717) 532-9121

QUESTIONNAIRE

A Study to Determine the Use of Shorthand

1. Name of Business Firm_____City_____

2. Number of employees doing office work (clerical, secretarial, stenographic, bookkeeping):

   a. 1 to 10_____ c. 26 to 50_____ e. 101 to 200_____

   b. 11 to 25_____ d. 51 to 100_____ f. 201 to 300_____

   g. over 300_____

3. Number of office employees engaged in secretarial/stenographic work:

   a. 1 to 10_____ c. 26 to 50_____ e. 101 to 200_____

   b. 11 to 25_____ d. 51 to 100_____ f. 201 to 300_____

   g. over 300_____

4. Percent of secretarial and stenographic employees transcribing dictation recorded by the following media:

	A. 0-25%	B. 26-50%	C. 51-75%	D. 76-100%
Manual shorthand	_____	_____	_____	_____
Machine transcription	_____	_____	_____	_____
Both	_____	_____	_____	_____
Other (please specify)	_____	_____	_____	_____

5. Indicate <u>MINIMUM</u> level of education for a secretary or stenographer:

   a. No education requirements but must possess knowledge, skills, and abilities _____

   b. High School with business education training _____

   c. High School with no business education training _____

   d. Business School _____

   e. Two-year college graduate with business training _____

   f. Four-year college graduate with business training _____

6. Is shorthand required for employment as a secretary or stenographer?

   Yes_____ No_____ (if No, Proceed to No. 10)

OVER

7. If Yes, what shorthand dictation speed is required for employment as a secretary or stenographer?

   60 wpm___ 80 wpm___ 100 wpm___ 120 wpm___ No minimum___ Other___

8. How is shorthand proficiency determined?

   a. Dictation test_____ c. Former employer____

   b. School records_____ d. Not determined ____

9. If a dictation test is given, please complete items A through D:

   a. At what speed is the dictation given:

      60 wpm___ 80 wpm___ 100 wpm___ 120 wpm___ No minimum___ Other___

   b. What is the length of the dictation (in minutes)_____

   c. Percent of accuracy of transcription accepted_____

   d. Time permitted for transcription:

      a. 30 minutes___ b. 60 minutes___ c. No minimum___ d. Other___

10. Has your firm been able to secure qualified secretarial or stenographic help in the last 12 months? Yes_____ No_____

11. Does shorthand skill enhance a person's promotion opportunities? Yes___ No___

12. How do job opportunities for qualified shorthand writers compare today with those in the past five years?

    a. Decrease_____ b. Remain the same_____ c. Increase_____

13. How will the demand for shorthand writers change within the next ten years?

    a. Decrease_____ b. Remain the same_____ c. Increase_____

14. How long have you been using the present media for recording dictation?

    a. 1-2 years_____ b. 3-5 years_____ c. 6-10 years_____ d. over 10_____

15. If your firm has changed from manual shorthand to machine transcription, what reasons brought about this change?

16. Will there be any change in the media used for recording dictation? Yes___ No___

17. Has your firm established a word processing center? Yes____ No____

18. If yes, how many secretarial/stenographic positions have been eliminated as a result of this change?

    a. 1-5____ b. 6-10____ c. 11-15____ d. 16-20____ e. over 21____

Thank you for completing this questionnaire. Please return it in the enclosed envelope.

SHIPPENSBURG STATE COLLEGE • SHIPPENSBURG, PENNSYLVANIA 17257

April 26, 1978

Dear Sir:

Your company was selected to be a participant in our study. We are extremely interested in learning if shorthand is used in the modern business office. This information will help business educators develop an appropriate curriculum to meet the present and future needs of firms such as yours.

Enclosed is a second copy of the questionnaire. Would you please take the time now to complete it and return it to us in the enclosed envelope.

Your cooperation in this study will help business educators better prepare students for employment in business offices.

Sincerely,

Ruth D. Armstrong

Ruth D. Armstrong, Chairman
Business Education/Office Administration

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